

**INTERNATIONAL SEARCH REPORT**International application No.  
PCT/CA2004/001438**Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons :

- 1  Claims Nos. :  
because they relate to subject matter not required to be searched by this Authority, namely:
  
- 2  Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically :
  
- 3  Claims Nos. :  
because they are dependant claims and are not drafted in accordance with the second and third sentences of Rule

**Box III Observation where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows :

Group I: Claims 1-34 and 41-56.

Group II: Claims 35 to 40.

- 1  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
- 2  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
- 3  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :
  
- 4  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. : 1-34 and 41-56

**Remark on Protest**

The additional search fees were accompanied by the applicant's protest.  
 No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CA2004/001438

## A. CLASSIFICATION OF SUBJECT MATTER

G08B-13/14, H01Q-13/20

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC v7: G08B, H01Q; US classes: 340/566, 340/552, 340/564, 340/565

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base, and, where practicable, search terms used) Canadian Patent Database, USPTO West, Pluspat, Inspec. Keywords: intrusion, coaxial, reflection, leaky, quadrature, reflectometry, codirectional

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US5446446 (Harman) 29 August 1995 (29-08-1995), col. 4, line 59 to col. 7, line 53; col. 9, lines 13-47; Fig. 2	41, 44, 46, 47
Y	US6577236 (Harman) 10 June 2003 (10-06-2003), col. 3, lines 33-67; col. 4, line 60 to col. 6, line 30; col. 8, line 58 to col. 9, line 3; col. 10, lines 47-48; col. 11, lines 8-32; Fig. 2.	48, 53
A	US4091367 (Harman) 23 May 1978 (23-05-1978), entire document	1-34, 41-56
A	CA1169939 (Harman et al.) 26 June 1984 (26-06-1984), entire document	1-34, 41-56

Further documents are listed in the continuation of Box C.

Patent family members are listed in annex.

\* Special categories of cited documents:  
 "A" document defining the general state of the art which is not considered to be of particular relevance  
 "E" earlier application or patent but published on or after the international filing date  
 "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)  
 "O" document referring to an oral disclosure, use, exhibition or other means  
 "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention  
 "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone  
 "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art  
 "&" document member of the same patent family

Date of the actual completion of the international-type search 05 November 2004 (05-11-2004)	Date of mailing of the international-type search report 26 November 2004 (26-11-2004)
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Name and mailing address of the ISA/ Commissioner of Patents Canadian Patent Office - PCT Ottawa/Gatineau K1A 0C9 Facsimile No. 1-819-953-9358	Authorized officer
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Patent document cited in search report	Publication date	Patent family members	Publication date
US 5446446 A	29-08-1995	WO 9516251 A1 EP 733250 A1 CA 2177691 A	15-06-1995 25-09-1996 15-06-1995
US 6577236 A	10-06-2003	None	
US 4091367 A	23-05-1978	GB 1468272 A CA 1014245 A1	23-03-1977 19-07-1977
CA 1169939 A1	26-06-1984	US 4419659 A	06-12-1983